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The Journal of Sociologic Medicine

Continuing the Bulletin of the

American Academy of Medicine

FEBRUARY, 1916

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The American Academy of Medicine

(Specializing in Medical Sociology)

The *American Academy of Medicine* is an association engaged in direct and positiv social service, altho its methods are those of investigation and discussion, rather than those of direct application.

It strives:—

A. To determine the correct relation of the physician to the present social order and to deduce principles by which he can be adjusted to the same. For many years this effort was directed solely to the proper education of the physician. It is gratifying to be able to record that the Academy's contention has been recognized (in fact tho not in frazing) by most of the medical practice acts.

B. To study the factor of medicine in social problems that the horizon of medicine be broadened, and its efficiency increast in problems investigated.

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The Journal
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VOL. XVII. ISSUED FEBRUARY, 1916. NO. 1.

THE AMERICAN ACADEMY OF MEDICINE is not responsible for the sentiments exprest in any paper or article publisht in the JOURNAL.

LEADING ARTICLE.

PHYSICIANS' FEES AND HEALTH INSURANCE.

In our December number, in noting the proposed model bill prepared by the American Association for Labor Legislation to establish a system of health insurance, we remarkt: "We have not seen the text of the bill but it would be remarkable if the same care were bestowed upon the welfare of the physician as upon the comfort of the workingman. * * * It is only another bit of evidence of the necessity of careful investigation of this whole subject by the medical profession and the formulating of principles to be incorporated in such acts, fair alike both to the patient and the doctor." This comment brought a remonstrance from Mr. John B. Andrews, the Secretary of the Association, in which he says:

I deeply regret that you should not have seen a copy of the bill in question and that you should have thought this association careless of the interests of the physicians. On the contrary, we have recognized from the outset that efficient medical service could be provided only if the terms of service were satisfactory to the doctors, and we have therefore sought the cooperation of your profession. Recently the American Medical Association appointed a committee consisting of Dr. Alexander Lambert, of New York, Chairman, Dr. Henry B. Favill, of Chicago, and Dr. Frederic Cotton, of Boston, to coöperate with us in framing provisions for administration of medical care.

We welcome this and all other coöperativ efforts because we realize that the problem of medical care can be most satisfactorily solved, not only for the physicians but for the insured persons, if the profession helps to formulate its administrativ details.

Upon receiving such assurance from Mr. Andrews we feared that we exprest a hasty opinion not based upon the facts in the case and we turned with considerable interest to the text of the proposed act, with comments thereupon.[1] To our surprize, while the medical care which is to be bestowed upon the insured is mentioned with some particularity, we failed to find any reference to the compensation to be received by the physician with a possible single exception. In providing that the insurance may be carried on thru "a labor union, benevolent or fraternal society," if approved by the Commission, it requires among other things that "it is not carried on for profit, but reasonable salaries paid officials shall not be considered profit," where possibly the physician of the society might be termed an official and receive a salary. It might be possible that the safeguarding of the fees to be paid the physician should not find a place in the text of the act and yet we are informed that the "Compensation Law" of the State of New York provides that the fee bills under the law "shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living."

This tentativ draft provides for an organization of a series of local health associations to be managed by a board of directors divided equally between the employers and the employees interested in the distribution of the insurance, and the question of medical compensation must be decided by each association, subject, of course, to review by the State authorities, opening the possibility for the continuance of all the evils of contract practice in its most objectionable form.

While the compensation of the medical man is not discust in the act, several things in this pamflet might be interpreted to mean the diminution of the existing fees of the physician. Thus, in

[1] "Health insurance." Standards and tentativ draft of an act. Submitted for criticism and discussion by the Committee on Social Insurance of the American Association for Labor Legislation, 131 East 23rd St., New York City. Second Edition, December, 1915.

the comment on Sections 18–20 of the tentativ draft, the following is to be found:[1]

> No new burden will be imposed on the employees. Investigators for the United States Bureau of Labor Statistics and for private institutions agree that at least 4 per cent. of the income of working class families goes for care of sickness or for burial insurance. Based on German experience, as noted hereafter, this would be about the total amount required for the benefits in this draft, and would be divided among employer, worker and state, so that the results of the insurance would be an actual lowering of the item of cost of sickness and burial in the family budget. Moreover, the benefits obtainable in such a subsidized system are greater than those which the workers' unaided contributions could purchase.
>
> On the assumption that 4 per cent of the wages will be required for the benefits provided in this draft, about what the German experience shows would be necessary, the total contributions for a man earning $600 would be $24 a year, or $2 a month. He would pay 80 cents a month, the employer 80 cents, the state 40 cents. Most mine hospital funds charge the employee $1 a month for medical attendance for sickness and trade accidents alone, usually including his family. (Secs. 19, 20.)

If the gross sum which heretofore was expended upon medical advice and supplies and funeral expenses is to provide sufficient funds for these purposes and in addition provide weekly benefits for the maintenance of the sick and his family, besides paying the expenses of the administration of the fund, it seems reasonable to infer that the amount to be received by the physician will be lessened beyond what he is now receiving. We admit the possible fallacy of this reasoning because under the proposed act those who are now treated gratuitously, either voluntarily on the part of the physician or by the non-paying of bills, will become contributors to the physician's income, and altho a less sum per capita is collected it will be collected from so many more as to increase rather than to decrease the gross income. But there is nothing upon the surface of the discussion to show that this faze of the subject was considered in drafting the act.

We are glad to receive the assurance of Mr. Andrews that the interests of the physician will be a matter of concern to the Association and are assured from the character of the committee appointed by the American Medical Association that sane, safe

[1] P. 14.

and sound advice will be given, looking towards the physician's interest, not for selfish aggrandizement but for the equitable arranging for the mutual benefit of all.

At the same time we feel that the criticism made in our last number, based upon somewhat extended observation of the money value placed upon physicians' service in public and semi-public capacities, was not unjust. CHARLES MCINTIRE.

[NOTE: As this article might be considered polemic it was submitted to Mr. John B. Andrews, Secretary of the American Association for Labor Legislation, for comment or criticism and he has given us permission to quote from his reply.]

"The explanation lies in the nature of the health insurance movement at present. We realize that this country has thought but little on the subject and that educated opinion, both among doctors and the insured workman, is a vital necessity. Our experience has shown that we cannot get American people to thinking actively upon such a subject unless there is immediate prospect of legislation. In confidence I may say that the present purpose of the health insurance bill and of the legislativ campaigns we are conducting is educational. We do not expect that the bill will pass this session, but we anticipate that the outcome will be the appointment of a state commission to study the subject.

"Had we laymen attempted to frame the provisions for medical benefit, we should doubtless not have met the approval of any section of the profession, but should have had condemnation from all sides. The British lesson of independent action in this field has made us hesitate to duplicate the conditions responsible for that unfortunate struggle. Moreover, the complexities of the administrativ arrangements, revealed in such a book as I. G. Gibbon's 'Medical Benefit in Germany and Denmark,' made us loathe to take up the task without the expert guidance of physicians."

A REVIEW OF THE TENDENCIES IN MEDICAL EDUCATION AND IN THE PRACTICE OF MEDICINE.[1]

By JOHN L. HEFFRON, M.D., ScD., Dean, College of Medicine, Syracuse University, Syracuse, N. Y.

A description of any medical school in the United States that was activ and crowded more than 25 years ago would seem to the recent graduates to be the picture of an educational institution so crude, so imperfect, so poor in its facilities that he would wonder how the older physicians of eminence whom he has learned to rever, could have received any real education within its walls. Well, they did'nt! They simply gathered information and met the requirements then laid down. The fact that they have become authoritativ is the ever recurring proof that men are superior to systems of education and that the inquiring mind of energetic man will surmount all obstacles, even those of the schoolman. In order that we may start with a correct understanding of what a medical school is that meets the demands of educators today, let us summarize the requirements. Such a school must be connected with a university and be under real university control, *i. e.*, be financed and administered in every particular by the trustees of the university as is every other college of the university. Most of the medical schools that have survived are now connected with a university, but in some instances the board of trustees has not yet been given full control. This mistake is fast correcting itself, for no medical school, however large, if its equipment in men and material is up to the standard, can longer pay its own bills from its tuitions. Such a medical school admits only those whose minds have been prepared for the mastery of the science and the art of medicine. Experience has proved that such preparation cannot be satisfactory with less than the work of the first two years of the baccalaureate course in science in a college and the trustees require that in these two years the student must have had a competent laboratory course in physics, chemistry and biology, and that he shall be able to read easily a foreign language, the medical literature of which is of pre-eminent value. To the old timer the first observable improve-

[1] Address, by invitation, at a meeting of the St. Lawrence County Medical Society at Ogdensburg, N. Y., October 5, 1915.

ment in the course in medicine is that it is graded and occupies four years. Then, that the first two years are given over to the study of the sciences fundamental to clinical medicine and surgery in properly equipt laboratories under teachers who devote their entire time to their work as in other colleges of a university. Thus anatomy, including embryology and histology, organic and physiologic chemistry, physiology, including pharmacology, materia medica, bacteriology and pathology are mastered. In most schools normal physical diagnosis is given in the second semester of the second year and generally surgical pathology. Now the laboratory method requires that each student shall repeat for himself the observations upon which a science is built up. To know is to do, not to cram the memory with reports of what others have done. These two years of the intensiv laboratory study of the fundamental sciences mark the completion of the university four years' baccalaureate course in science and the degree of B.S. is its public recognition.

Besides giving a definit cultural value these years furnish also the best possible preparation for the work to come, for the student has been trained not only to accurate observations but to extend the observations of his unaided senses by the expert use of the instruments of precision, to do for himself every essential experiment and to compare and classify his observations, so that from them he may make logical deductions. In the junior year, the systematic courses in the practice of medicine in pediatrics, in surgery, in obstetrics, in therapeutics and in laboratory diagnosis are completed. The student is exercised in case taking and in diagnosis in the dispensary or in the hospital ward and in the management of labor and in minor surgical operations. The senior year is purely clinical, except for brief, general courses in the diagnosis and in the treatment of the diseases of the organs of special sense. In most schools the students spend one-half of each day as clinical clerks in hospital wards and have the duty, not the privilege, of examining patients that enter and of participating in the further management of the case whether it be medical or surgical. The public health course is given in this year and is almost entirely laboratory and clinical. The course

in diseases of the mind comes in this year and is as largely clinical as facilities permit.

Such a course as outlined is planned to make the student a safe general practitioner, which is the reasonable demand of the state. How nearly it accomplishes that purpose depends upon the appreciation on the part of each teacher of what is essential and what is not and upon efficient team work in the faculty of instruction. But the curriculum is rigid and too burdensome. The 4000-hour course, an educational absurdity, is made apparently necessary in order to meet the present standards of the American Medical Association and the Association of American Medical Colleges. The first tendency, and, I think, necessity is to make this course more flexible. The demand for laboratory teachers and for research workers is now much greater than the supply. The earnest student who has his greatest joy in such work, should have an opportunity even while an undergraduate, to pursue farther than is necessary for the general practitioner the subject to which he intends to devote his life. Just how this shall be done in a four years' course is not yet clear, but by a system of electives it is under trial in a few schools.

The crux of the matter seems to lie in the character of the examinations given by the state. The method of examinations has not kept pace with the improvements in medical teaching. They are still written tests of information, not of knowledge. They should be conducted in laboratories and in hospital wards under conditions similar to those observed in instructions. One state, Minnesota, has made a beginning of practical examinations in some departments and the time is approaching when all states will follow that method completely.

The next tendency concerns the improvement of clinical teaching. In order that clinical instruction shall be what it should, the university must own or control a dispensary and a teaching hospital of adequate capacity. The old time demonstration clinic is of little value compared to the bedside instruction of a small group of students who are permitted and required to make their own diagnoses and their own laboratory examinations of patients under observation. To own and conduct a teaching

hospital is enormously expensiv. Many universities have been compelled to do this, but when the public shall realize that one of the most important functions of an hospital is to give opportunity for the education of those who are shortly to be their own physicians it shall be natural for the trustees of a large city hospital to ask a university to take the responsibility for the medical and surgical service while they care for its financing and its general management. Granted that a university controlled hospital is a necessity, the question at once arises as to how the teaching in such an hospital can be done most efficiently. In nearly all medical schools the clinical teaching is done by practicing physicians, surgeons and specialists, and without pay. This has made clinical teaching secondary to the exigencies of exacting practice and in some instances the teaching has suffered. It would be difficult to speak too highly, however, of the service of the many noted men in our profession who have given freely of their time and their strength to clinical teaching. It is they who have made the reputation of our schools and who have consistently advocated higher standards of education. In Johns Hopkins, from the beginning, the clinical teachers have been paid and have been considered university teachers and have been pickt from among the men who have developt most markt ability wherever found. But they have been expected to devote a part of their time to consultations and to be entitled to the fees thus earned and have thus kept in touch with their confreres. The preliminary report of the Committee on the Improvement of Clinical Teaching of the Council on Education of the American Medical Association recommended the general adoption of this sytem and it is sure to come. Within two years the Rockefeller Foundation has granted a large sum of money to Johns Hopkins University on the condition, proposed by medical teachers, that the heads of the departments of medicine, surgery and pediatrics devote their entire time to teaching. They are permitted to see patients of scientific interest in consultation, but the fees for such consultations are paid into the treasury and not to the consultant. Assistants to each head are furnisht by fellowships or by pay for work in full or in part. Similar arrangements have been made in

Washington University and in Yale. This is an interesting experiment. Professor Welch reported in March that the first year of the work so far had met with encouraging success. The objections that have been made against it by medical men are that it will draw from general service the very men who are the most highly trained and to whose ability the public has a certain right and that the men so withdrawn must sacrifice the right to remuneration for the talent which they have developt. It is feared that it may develop in medical teachers that narrowness which somehow seems to inhere in professional teachers. The condition in German universities is recalled and it is a question if the clinic may again become a lecture and, instead of stimulating individual work by the student, it may lapse into the old time demonstration clinic and the dogmatic presentation of the case to a listless student body. From the university side there has come the natural objection of the probable greatly increast expense. No financial report of the expense of this work has been given out, but if the assertion of the Chairman of the Council on Education of the American Medical Association that in one month one of these men who received $833.33 from the university in salary turned into the treasury more than $2000.00 should prove to be anything like a general rule it is easy to see that there can be no loss to the university. Of course such a condition cannot be expected to prevail if this plan for university clinical teachers becomes quite generally adopted. Before we venture to pronounce judgment or to advocate it, we should await without anticipation and without criticism the results upon the students. The training of men for independent and efficient service is the proper test.

This note of efficiency brings us naturally to the last observation on the educational part of my subject. For many years it has been the custom for graduates in medicine to seek voluntarily service as internes in an hospital. Whether such service has been of value equal to the expenditure of his time and energy, has depended upon circumstances over which no one but the trustees of the hospital had control. In the larger city hospitals the organization has been generally good enuf to make such service

distinctly valuable tho far less so than is possible. But the need for this experience in the responsible care of the sick and injured under able staff officers before one assumes the duties of private practice is so generally recognized that a distinct movement to make such a fifth hospital year obligatory is now in full force. Two states have done so, and, of course, it must be the state which takes this responsibility, for the school from which the graduate comes can have no control over whatever instruction may be given in an hospital not owned or controlled by itself. Last year the Council on Education of the American Medical Association appointed a committee in each state to examine and report upon the hospitals for the purpose of determining what hospitals were properly equipt for interne service. It fell to my lot to be the Chairman of the Committee for New York. A questionnaire was prepared by the Council on Education. This was sent to every hospital in the State. The answers were analyzed and the hospitals were classified as accurately as was possible. But the answers were so generally unsatisfactory, because they were made by officers of the institutions and not by a personal examiner, and often made without an understanding of the real purpose of the examination and sometimes with resentment at an apparent interference, that in offering the first report read, I was obliged to conclude that we had had our labor for our pains. That was the unanimous sentiment of all the state committees present at the meeting. The Council then askt the Trustees of the American Medical Association to grant an appropriation so that expert canvassers could be employed to make a personal investigation of every hospital available for first-class interneships. In my opinion even such a plan cannot wholly succeed, for a voluntary organization, like the American Medical Association, has no power to establish and enforce standards for hospitals acceptable to itself for the purpose indicated. It must be done by the state which grants charters to hospitals. The state alone has authority to say to a hospital which it charters, that internes as hospital officers can be allowed only in such hospitals as meet in every particular the requirements for that purpose. Pennsylvania has done this. New York must do this work first before it makes obligatory the fifth hospital year.

Now, medical schools have been, are and always shall be just what the profession itself demands. One of the objects of the association of physicians in medical societies, county, state or national, as stated in the constitution has been "to improve medical education." Not one of the improvements which have markt the evolution of medical education has come from outside the profession, not even the demand for the association of medical schools with universities. There is not a law on the statute books of any state designed to protect the people by improvements of the medical practice act, which did not eminate from a medical society and which was not fought thru the legislature by medical men. The report of the investigation of the medical schools of the United States and Canada by a trained educator under the auspices of the Carnegie Foundation, publisht four years ago, was very helpful, particularly because it was given to the public and so helpt greatly in encouraging citizens of intelligence and means to make possible improvements long demanded. It contained no news to those men in our profession who were conversant with educational problems and who knew medical schools. The ideal set up was no new one, but was one already working successfully at Baltimore. The Council on Education of the American Medical Association had already assembled the facts and had workt diligently and intelligently and had started the improvements which are now so generally observed. This report gave the needed inspiration to educators and to men of wealth. Whatever advances the future of medical schools shall need, shall be workt out in the same way. It is we, in our county organizations, that should study these questions and be prepared to further any real and needed improvements in medical education, in the state and in the nation. The five vicious medical bills vetoed last winter could never have past both houses of legislature if we had educated the people to understand clearly the fundamental principles of the medical practice act, *viz.:* that the state demands for the protection of its people that only those may treat the sick and injured who have proved to the state that they know the human body and the causes and the consequences of diseases and of injuries.

THE PREVENTION OF ORIENTAL DISEASES.[1]

By Rupert Blue, D.Sc., M.D., D.P.H., Surgeon-General, U. S. Public Health Service, Washington, D. C.

It is a basic fact of epidemiology that most of the communicable diseases of man are peculiar to the human species. Reasoning from this premise, it may be deduced that man is the disseminating agent of his own ailments, and that wherever he goes he carries in his own body the causativ agents of these maladies. Frequently a group or race acquire a certain immunity to their own infections, but when they migrate and implant them on the virgin soil of a non-immune population there occurs a markt exacerbation or even a fulminant epidemic outbreak.

The settlement of the United States has been from the east to the west and as the tide of immigration rolled from the Atlantic to the Pacific, it swept before it the aboriginal race and destroyed it, not wholly by reason of force of arms, but because of its non-immunity to the diseases of the whites. For many years there has been a steady immigration into the United States from east to west. In other words, there has been an oriental incursion. As a result the white inhabitant of the Pacific Coast has been exposed to a number of maladies to which he has neither an immunity or a tolerance.

Due cognizance of this fact has been taken by the United States Government. Every endeavor has been made thru the logical application of maritime quarantine and the physical examination of arriving alien immigrants to prevent the entrance of disease-bearing persons and things. It is a trite, but none the less true saying, that perfect results in the application of quarantine procedure cannot be obtained without disastrous hindrance to commerce and that the operation of maritime quarantine is merely the culling out of the larger and more apparent disease elements. Thru the physical examination of arriving aliens, it has been possible to remand persons having certain diseases which are difficult to cure and to hold and treat others before

[1] Read at the 40th Annual Meeting of the American Academy of Medicine, San Francisco, June 26, 1915.

permitting them to land. Any addition to the already existing hookworm infection in the state has in this way largely been prevented. It should not be forgotten, however, that there are many infections, particularly those of animal parasitic origin, which cannot be detected by the routine examination of immigrants, and that should these infections once gain lodgment in the United States their eradication may be accomplisht only at the cost of much labor and money. Among these are filariasis and the various fluke infections, for example, clonorchis sinensis and the paragonimus westermani.

The danger of the introduction of cholera must also be borne in mind. While it is true that in the great majority of cases cholera carriers do not long harbor the infection, the possibility of their remaining infected as long as seventy-five days in extreme cases requires care lest cholera be introduced in this way. The rapid bacteriologic method which has been perfected by McLaughlin and Goldberger renders the diagnosis relatively easy and permits its being made without undue detention of the passengers. At the present time it is not necessary that this be applied as a routine measure, but should cholera become prevalent in oriental ports it would be necessary.

The danger of the introduction of plague is omnipresent and will so continue until rat-proof ships are in common use. On the Pacific Coast, particularly at San Francisco and Seattle, considerable activity has been displayed in the building of rat-proof buildings and wharves. This, of course, is an important measure for the prevention of human plague, and if carried to a logical conclusion will render our cities immune from pest.

It may be proper to mention here the danger of the introduction of trachoma from the Orient. This is practically controlled, however, by the examination of arriving aliens at the immigration stations. In this connection it should be recalled that the disease is already quite prevalent in many parts of the United States and that it has been necessary for the Federal Government to erect special hospitals for the control of the disease in certain districts.

While we already have a widespread uncinariasis in this

country, we should not overlook the danger of agylostomiasis from the Orient. At the present time all arriving aliens presenting any symptoms of the disease are held for further medical examination. This has led the Japanese and Chinese Governments to take measures looking to the care of persons having hookworm prior to their embarkation. These measures have reduced considerably the amount of work which we have had to do on this coast.

Sprue is another infection which might be introduced into our country from the Orient. As a matter of fact, the disease has been reported in two or three portions of the United States already.

The recognition of these diseases must, therefore, rest upon the general practitioner. At the present time this is not an easy task. The reason for this lies in the fact that up to a few years ago, practically no instructions whatever were given in the medical schools upon the subject of tropical diseases. These were regarded entirely as exotic and it was thought that they could never gain a foothold on American soil. The investigations of the last few years, however, have shown that we really live in a sub-tropical climate and that those diseases which were formerly considered as confined to the tropics may find lodgment in almost every portion of this country.

Since these diseases exist, and since the first line of defense cannot accomplish perfectly the exclusion of such infections, it is logical to deduce that the second line of defense, that is, the general practitioner of medicine, must be strengthened. This can, to my mind, be best accomplisht by the institution of courses in tropical medicine in all medical colleges. These should be of two sorts. First, the general instruction to be given the undergraduate, the object of this course being to acquaint him with the general symptoms and science of tropical and sub-tropical diseases, so that he may realize the necessity for calling in expert aid in cases of doubtful diagnosis. Secondly, there should be post-graduate courses for those who desire to go further into the subject, or to adopt tropical medicine as a specialty. Such courses should include not only the dietetic instruction in tropical

medicine itself, but also bench work in helminthology, etiology and the various diseases of parasitic origin. This should be supplemented by work in the clinic and in the wards. And in locating such institutions, advantage should be taken of the availability of clinical material. New Orleans already has an institution which is carrying out work along these lines. It would seem to me that San Francisco, on account of its close oriental connections, is ideally situated for the foundation of another similar institution. If we can in this way equip and train a large number of physicians, we will have, in my opinion, the most practical weapon for the prevention of oriental diseases.

It should be borne in mind that the principles which underly the prevention of oriental diseases are practically the same as those which underly the prevention of the occidental diseases. Therefore, the public health awakening which is now occurring in our country will act in a considerable measure to prevent oriental diseases. With the improvement in the sanitary laws, with the employment of the full time health officers, with the public health education of the general public, there is bound to come a lessening of communicable diseases in general.

THE CONTROL OF HOOKWORM DISEASE BY THE PACIFIC MAIL STEAMSHIP COMPANY.[1]

By Herbert Gunn, M.D., San Francisco.

In 1910 it was demonstrated by Assistant Surgeon Glover of the United States Public Health Service that a very large percentage of the Hindus arriving at the Immigration Station at San Francisco were infected with hookworm. Observations among the Chinese and Japanese revealed a similar state of affairs.

Thru the untiring efforts of Dr. Glover, the capacity of the Immigration Hospital at Angel Island soon became taxt with hookworm cases, as the immigration authorities if not deporting a case, required that it be treated and cured before being landed at San Francisco. The detention sheds at the Immigration Station likewise became congested on account of the unusually large numbers being held for treatment.

In 1912 the United States authorities issued an order requiring a medical certificate showing freedom from hookworm disease at the time of embarkation in aliens coming from hookworm infected districts. This was accomplisht by including hookworm disease in a regulation which imposes a fine of $100.00 on any steamship company transporting to the United States an alien afflicted with a dangerous, loathsome or contagious disease, if a proper examination at the port of embarkation would have demonstrated the existence of that disease.

Following this order Chinese at Hong Kong were required to furnish the necessary medical certificate to the Steamship Company before being permitted to embark. This work of certification was soon confined to a small group of practitioners in Hong Kong, and it very soon assumed such enormous proportions that the establishment of a hospital for the treatment of those found infected became necessary. This plan workt fairly well for a time, but it was soon found that the number of infected persons arriving at Angel Island was steadily increasing, altho

[1] Read at the 40th Annual Meeting of the American Academy of Medicine, San Francisco, June 26, 1915.

they all had the necessary Hong Kong certificates stating that they were free of the disease, or had been treated and cured. This state of affairs caused considerable dissatisfaction among the Chinese, for after going to considerable expense in Hong Kong for medical certificates and hospital treatment, they frequently had to repeat the procedure on arrival at San Francisco. Naturally this discouraged many from coming to the United States.

Early in 1913 the matter was brought to a focus by the immigration authorities, owing to the congestion at the Angel Island Hospital on account of the large number of hookworm cases, all holding certificates from the Hong Kong physicians stating that they were free from the disease. It was intimated that in future it would be impossible to permit the treatment of cases arriving here and that they would be deported.

Two methods of dealing with the situation presented themselves for consideration to the Steamship Company:

First. The establishment of a hospital to carry on the work in Hong Kong or vicinity.

Second. The examination of all cases in Hong Kong by a representativ of the Steamship Company and the treatment of those found infected by the ship surgeon while en route.

After discussing the matter with the immigration officials, the latter plan was determined upon.

After a thoro course of instruction, an experimental trip was made by Dr. Conrad Richter, who later was stationed in Hong Kong. Eleven cases were treated, all of which were cured before arrival and admitted by the immigration authorities.

Before being permitted to undertake the work, each surgeon from the seven ships of the Company was given a careful course of instruction in the laboratory methods of examination and in the treatment of cases. For the latter purpose a ward was retained in one of the hospitals in San Francisco, where hookworm cases were treated by the ship surgeon under the direction of the instructor.

Each ship was equipt with a microscope, electric centrifuge, and other necessary paraphernalia.

Suitable arrangements were made for the isolation of patients while under treatment in order to lessen the liability of their obtaining food and drinks from other passengers.

In Hong Kong a thoroly equipt laboratory was establisht under the direction of Dr. Richter, who was assisted by the ship surgeons during their stay in that port.

The results of these examinations were recorded on certificates bearing fotografs of the aliens examined and were turned over to the ship surgeon. The most rigid precautions were taken to avoid errors or deceptions in obtaining the specimens for examinations, the stools being past in a room in the presence of an attendant. This was absolutely essential, as it was known that the Chinese had practised all sorts of deceptions in order to obtain a certificate.

In all cases past by the examining surgeon in Hong Kong as free from the disease, a small specimen of the stool preserved in formalin was forwarded to San Francisco to be examined should the case be found infected upon arrival at Angel Island.

The Steamship Company made no charge for the examination in Hong Kong, but a charge of $30.00 Mexican (about $13.50) was made for treatment aboard ship. This amount, which was considerably less than that charged by the Hong Kong physicians for treatment, was to cover the cost of treatment, salaries, fines paid the United States Government, and allowed a bonus of $5.00 gold to the surgeon for each case cured en route.

As soon as practicable after the Hong Kong examination, those examined were placed aboard ship, those infected with hookworm being placed in charge of the ship surgeon for treatment.

Weather conditions and port regulations necessitating inspection of the passengers had next to be taken into consideration in regulating the course of treatment.

In the beginning of the work, the orders were to give treatment two days in succession with a rest of three days following. Slight modifications, such as single day treatments and treatments of three days in succession, were found expedient on account of the

ship's schedule. However, the interval of from two to four days between the courses of treatment was observed.

Thymol was used, the dose for an adult being 20 grains hourly for four doses, or 80 grains during the morning.

Castor oil oz. $1^1/_2$ was given the night preceding the course of treatment; and Epsom salts oz. 1 two hours before, and again one hour after, the administration of the thymol. Castor oil was repeated the night preceding the next course of treatment but was never given on a day during which thymol had been taken.

No food was taken on the day of treatment until two or three hours after the last dose of thymol, when a broth was given. This was repeated in a couple of hours, and in the evening full diet (consisting mostly of rice and fish) was allowed.

After two courses or four days' treatment, examination of the stool was made, those found cured being dismist from further treatment or given an additional course of two days.

In the uncured cases the courses of treatment and the re-examinations were continued until San Francisco was reacht.

In cases where the re-examinations had not been completed at the time the next treatment was due, the treatment was given.

In cases which took the thymol badly, in children, very old people, etc., the re-examinations were made immediately in order to give as little thymol as necessary.

It was soon found that the three days' interval between the treatments permitted only between seven and ten days' actual treatment, which was not sufficient to cure the intractable cases. Patients destined for Honolulu could receive no more than five or six days of treatment.

Furthermore, the immigration authorities objected to treatment being given between Honolulu and San Francisco on the grounds that the thymol inhibited the deposit of eggs, thereby necessitating a delay before examinations could be made at Angel Island.

In view of these facts, the treatment was modified as shown in the following extracts from the instructions given to ship surgeons:

In view of the desirability of having all cases cured before arrival at Honolulu it is necessary to shorten the intervals between the treatments. Instead of waiting three days as heretofore before repeating the treatment, it may be repeated after a rest of one day. This will readily permit of two full courses of two days each being administered between Hong Kong and Yokohama and of three such courses between Yokohama and Honolulu, and in exceptional cases of two additional courses between Honolulu and San Francisco. The treatment should be started as soon after leaving Hong Kong as possible, immediately after leaving Yokohama and when necessary immediately after leaving Honolulu.

Re-examinations of stools should be commenced not later than with the beginning of the treatment on leaving Yokohama. Should there not be sufficient time for the surgeon to complete all stool examinations between courses of treatment the treatment should be given when due and the stool examined later. When the stool is found to be negativ for hookworm the patient is continued under treatment during the following course of two days, after which all treatment is discontinued. Four days later a re-examination of a fresh stool is made and the patient pronounced cured or treatment resumed as the case may be.

The finding of eggs in this final re-examination will almost invariably mean that they were overlookt when the stool was previously pronounced negativ, as contrary to the general belief, this treatment but rarely inhibits the deposit of eggs.

Cases which do not take treatment well should be given special attention and their re-examination made first in order to give them no more of the drug than is necessary.

Cases en route to Honolulu should be given every course of treatment, *i. e.*, five courses or ten days as there is not sufficient time to resume treatment should the final stool examination prove positiv; exception to this should be made, of course, if the drug were not well tolerated in which case they should be handled in the same manner as those en route to San Francisco.

The medication should be carried out exactly as in the past, *i. e.*, castor oil the evening preceding the course of treatment; salts before and after the thymol, and thymol gr. 20 hourly for four doses—or in all 80 grs.

In January, 1914, three months after the treatment had been instituted aboard ship, the immigration authorities began imposing a fine of $100.00 for every hookworm case that the Company had treated aboard ship and had failed to cure. This was accomplisht under the following regulation: "Any steamship company transporting to the United States an alien afflicted with a dangerous, loathsome or contagious disease, if a proper examination at the port of embarkation would have demonstrated its existence, is liable to a fine of $100.00."

While it is true that up to this time the results of the Steamship Company in treating these cases were not perfectly satisfactory, yet the fact remains that the number of hookworm cases arriving at this port had been greatly reduced. Furthermore, there was every reason to believe that the Steamship Company's method of handling the cases would show better results as time went on.

However that may be, the Steamship Company was placed in the unique position of paying a fine if they failed to cure a case, or of discontinuing the work and allowing the Chinese to again be handled in Hong Kong, where conditions had previously proved so unsatisfactory. It was decided to continue the work and pay the fines.

In view of the fact that over 500 cases had been treated with no untoward results in any, the maximum dose of thymol was increast from 80 grains to 120 grains, 30 grains to be given hourly. This increast dosage was to be used only in the few cases remaining uncured after several courses of treatment had been given.

The following is an example of the treatment as carried out in an intractable case:

Leaving Hong Kong June 26th and arriving in San Francisco July 25th.

June 27	Thymol gr. 80.
June 28	Rest.
June 29, 30 and July 1	Thymol gr. 80 daily.
July 2 and 3	Rest.
July 4–5	Thymol gr. 80 daily.

On account of bad weather after Yokohama, no treatment until

July 10–12	Thymol gr. 90 daily.
July 13	Rest.
July 14, 15, 16, 17	Thymol gr. 100 daily.
July 18	Rest.
July 19, 20, 21, 22	Thymol gr. 120 daily.

A total of 1560 grains of thymol given on 16 days. Examination of the stools showed positiv until the morning of the last treatment.

RESULTS OF TREATMENT.

Over 60 per cent. of all the Chinese examined in Hong Kong were found to harbor hookworm.

Total number of cases treated aboard ship, 1776.

Number not cured on arrival at San Francisco, 55 or 3 per cent., according to the Steamship Company's examinations of specimens secured after arrival of the ship in San Francisco and before disembarkation.

Additional specimens obtained by the ship surgeon at the final examination aboard ship, when the patient was pronounced cured, were preserved and kept for examination in the event that the patient was not pronounced cured by the immigration authorities.

Of the 55 cases which were not cured, 29 or 6 per cent. occurred in the first 462 cases treated, and 26 or less than 2 per cent. in the balance of 1314 cases.

Treatment was given on 33 voyages, an average of 54 patients a voyage, and, as the ship surgeon treated and re-examined these in addition to his routine duties, much work had to be omitted which would have been of scientific value.

The largest number treated on one voyage was 149, four of whom were not cured on arrival in San Francisco.

The number of daily treatments required to effect a cure may be judged from the following figures. Sometimes several treatments were given before a re-examination was made.

Mongolia. *Voyage 45.* *Dr. Terrill.*

61 cases.

51 or 83 per cent. cured in five treatments.
7 received 9 treatments.
3 or 5 per cent. received 14 treatments.

The maximum dose was gr. 80, excepting in the last three, in which it was gr. 100.

Korea. *Voyage 57.* *Dr. Sprague.*

82 cases.

11 or 13 per cent. cured in two treatments.
35 or 42 per cent. cured in four treatments.
18 or 22 per cent. cured in seven treatments.
6 or about 7 per cent. required 17 treatments.
One receiving 18 days' treatment was uncured.
80 grains of thymol was the maximum dose, excepting in intractable cases where it went as high as 120 grains.

Siberia. *Voyage 54.* *Dr. Terrill.*

45 cases.

34 or 75 per cent. cured in five treatments.

1 or over 2 per cent. cured in 15 treatments.

Korea. *Voyage 56.* *Dr. Sprague.*

102 cases.

50 or about 50 per cent. cured in four treatments.

3 or about 3 per cent. uncured after 18 treatments.

80 grains of thymol was the maximum dose except in a few cases where 120 grains were used.

These results correspond very closely with results in the past as to the number of treatments required to effect a cure and as to the intractability of certain cases.

The limited period during which treatment could be carried out on board ship (an average of 27 days) made it imperativ to give large and frequently repeated doses.

In regard to the length of time required for a cure, the statement of Ashford in the 1911 Report of the Hookworm Commission in Porto Rico is interesting. He shows that the moderately infected cases averaged two months to cure, and that 21 per cent. of those severely infected required from 60 to 100 days. Treatment was given once a week and the average dose was 60 grs. of thymol.

EFFECTS OF LARGE DOSES OF THYMOL.

In several instances the ship surgeon, either on account of lack of time to make the necessary stool examinations, or possibly because of lack of confidence in his ability to pass final judgment upon the specimens, kept the treatment up in all cases until San Francisco was reacht. As an example, the Siberia sailed from Hong Kong on May 16th with 85 patients. They were all treated as follows:

May 17 and 18	Thymol gr. 80 daily.
May 19	Rest.
May 20, 21, 22	Thymol gr. 80 daily.
May 23, 24	Rest.
May 25, 26	Thymol gr. 80 daily.
May 27	Rest.

May 28, 29, 30	Thymol gr. 80 daily.
May 31 and June 1	Rest.
June 2	Thymol gr. 80.
June 3	Rest.
June 4, 5	Thymol gr. 80 daily.
June 6, 7	Rest.
June 8, 9, 10, 11, 12	Thymol gr. 80 to grs. 120 daily.

There were no bad effects in any of these 85 patients who had received not less than 1520 grains, and a few 1720 grains, of thymol in a period of 26 days.

Much has been written on the bad effects of thymol and the dangers resulting from its use. Nearly every author who mentions thymol uses as much space to explain what a dangerous drug he is advocating as he does to explain the method of its administration.

For some years past I have used large doses of thymol, often repeated for several days in succession, and I have yet to see any serious results from its use.

Practically but very little of the drug is absorbed, and it may often be noted that disagreeable symptoms, such as dizziness, nausea, and burning in the pit of the stomach, occur as frequently with small as with large doses.

In my experience there is practically no effect on the urine in the great majority of cases, and in the others it is but transitory.

The greatest effect is on the intestinal tract, and even here it is as a rule but slight and transitory. In hundreds of cases examined the stools appeared normal a few days after treatment had been discontinued. Occult blood, which is almost invariably present in even the lightest hookworm cases, usually disappears a few days after a cure is effected. Examinations for occult blood in over 100 cases treated by the Steamship Company showed all negativ a few days after heavy treatment had been stopt.

Loss of weight from the repeated purging is the only ill effect that the majority of patients show after a strenuous course of treatment.

Of the 1776 cases treated by the Steamship Company, but one died of any cause whatsoever. A man, age 48, apparently in good health, was infected with hookworm and ascaris lumbricoides.

Aug. 18 in the evening received Santonin gr. 2, and castor oil oz. $1^1/_2$.
Aug. 19. Salts 6 A.M. At 8, 9, 10 and 11, Thymol gr. 20, 80 gr. in all.
Aug. 20. At night. Oil and santonin again.
Aug. 21. Thymol gr. 80. Salts before and after.
Aug. 22. Thymol gr. 80. Salts before and after.
Aug. 23. Oil and santonin at night.

He slept but little that night. On the morning of the 24th the patient was very restless and talkativ; made an attack upon one of the sailors; soon became somnolent. Pulse 110. Temperature 96.6. Catheterization showed the bladder empty. The patient died the following morning of uremia.

This patient received three treatments of thymol on the 19th, 21st and 22nd, respectively, slept poorly on the night of the 23rd, developt symptoms of uremia on the 24th and died on the morning of the 25th. Friends stated that he had suffered from kidney disease four years previously. Unfortunately, no urinary examination of this case was made before treatment. If this patient's condition was superinduced by the thymol, which I question, it occurred within 36 to 48 hours after only a moderate dose.

To quote Ashford again: "We have not shared the opinion of many as to the danger of administering thymol under a certain amount of precaution. The experience of two of us in some hundreds of cases in Ponce demonstrated that its danger was greatly exaggerated and generally resulted from its solution in alcohol or oil. We came to know that thymol was an exceedingly inoffensiv drug, as a result of our further acquaintance with it, etc. Our practical observation is that it is not absorbed to any great extent."

In the Steamship Company's series there were several cases of collapse, but none were serious and all resumed treatment later, that is, on subsequent days.

Vomiting frequently occurred, as often from the salts as from the thymol. In one or two cases the drug was discontinued on this account and chloroform and eucalyptus used.

In one case an intestinal hemorrhage was reported, which was not serious and a few days later treatment was resumed without ill effects.

Under ordinary circumstances I do not believe that the very large and frequently repeated doses mentioned in this paper are necessary. Whenever the drug is administered in this way the stools should be examined at least every other day and preferably daily, in order to discontinue the treatment as soon as the patient is cured.

My usual plan of treatment where patients can be kept under observation, is to give two days' treatment with a day of rest following.

In an adult in good condition the first dose is not over 80 grains and is increast within a day or two to 120 grains.

Stool examinations are made daily and as soon as this proves negativ the treatment is stopt.

The average length of time required for a cure is about seven days.

240 Stockton St.

THE POWER OF QUARANTINE IN ITS RELATIONSHIP TO COMMERCE.[1]

By M. W. Glover, M.D., Surgeon, U. S. Public Health Service, Washington, D. C.

The power of maritime quarantine, in so far as it is founded on law in this country, is exprest in various acts of Congress, especially that of 1893. But the power of quarantine is really derived from the necessity of exchanging our commodities for those of other countries without imperiling the public health.

It has been said that nothing is so cheap as human life. My observation, however, is that this always refers to the other fellow's life, not to one's own. Everyone shrinks from exposure to pestilence. It is this fear that gives to quarantine its power, exprest in the legal statutes. The power written therein is, within limits, absolute. In administration, however, it must be wisely used, the object ever being kept in mind, for abuse of power leads only to its loss. A stream never rises higher than its source, so in a democracy such as ours the power that flows from the people can never be greater than those who grant it. The United States Public Health Service endeavors to administer its maritime quarantine to the end that the public health may be protected with the least possible disturbance to commerce. In the furtherance of this aim we incorporate into our regulations and practices the advances of medical science. To those enthusiasts marching in the van who think we are slow and inclined to cling to old idols, I would say that, as a branch of the Federal Service, we reflect the sentiment of some 90,000,000 and that only after a practice has been thoroly proven may we safely adopt it.

The advances made in maritime quarantine in the last generation have been most rapid and to-day only the name remains to remind us of what the practices were in the early days of our country's commercial life.

The term quarantine, we are told, comes from an Italian word "quaranta," meaning forty. When instituted by the

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Venetians, and until modern times, the word implied a term of isolation for vessel, cargo and persons of forty days. It was supposed that by isolating the vessel and its contents for forty days they would free themselves from pestilential infection. It is probable, as suggested by Caldwell, that the period of forty days was fixt upon thru a superstitious regard for the 40-day fast of our Saviour, which the Church has recognized by the institution of Lent, a period of abstinence for the purification of the Soul. Or the period of the wandering of the Israelites in the wilderness before they were deemed worthy to enter the promised land may have had its influence on the superstitious institutors of quarantine in fixing forty days for the period of sanitary purification.

The early days of quarantine were the early days of commerce. It was learned thru bitter experience by communities that pestilences were carried to them thru intercourse with neighboring sources. Knowing nothing of the causes or modes of spread of diseases, what more natural than the attempt to stop the contagion by interrupting trade? The primitiv measures of quarantine we read of in medieval history we find repeated in the shotgun quarantines of our own country in modern times.

The first record we have of a well-defined code of quarantine regulations dates back to 1448 when Venice enacted a digest known as the Laws of Quarantine. This code required all vessels from suspected places to undergo a period of probation before they were allowed to enter the port and discharge their cargoes. Individuals were obliged to remain in isolation for forty days in the lazaretto or pest-house.

At this time Venice monopolized the trade of the Levant and her vessels visited every coast of Europe so that it is not surprising that, having suffered repeatedly from pestilence, she should have originated maritime quarantine. Bills of health are said to have been introduced in 1527 during a fatal plague in Italy, which lasted five years. Following the example of Venice, quarantines and lazarettoes as a means of protection were establisht by other powers along the shores of the Adriatic

and gradually extended to other commercial nations, until it became a recognized procedure the world over.

As the means, extent and rapidity of communication between countries increast, commerce became more and more impatient at this arbitrary delay. It was pointed out that epidemics occurred despite the forty days spent in solitude and many argued that these pestilences arose from other sources than vessels arriving from infected countries. Thus quarantine fell into disrepute and in one country, England, it was abolisht. England is still without quarantine, it is often said, but, as a matter of fact, England has a quarantine, as we now understand the word, to which reference will be made later.

Modern quarantine retains little of the quarantine of older times other than the name. Founded on a more thoro knowledge of the epidemiology of diseases, its practices are dictated by common sense and reasonable application of the latest discoveries of medical science. Born of ignorant fear and superstition, quarantine struggled thru the centuries striking blindly at an intangible foe, until the period of renaissance of medical science dawned. When the researches of Pasteur, Lister, Koch, and other master minds establisht the germ theory of communicable diseases, quarantine ceased to be an arbitrary dictum founded on vague and now seemingly fanciful theories. The greatest advance in quarantine evolution was the application of disinfectants to vessels and freight. At one step this freed commerce from the arbitrary delay of weeks, and substituted for measures of absolute exclusion those of rational admission.

While we may complacently review the recent progress of quarantine it does not follow that we are at all satisfied with its present status. The evolution of this fase of public health work is still going on. More and more are we inclined to doubt the value of gaseous disinfection and more are we depending on fumigation for vermin, the known carriers of diseases. The advisability of holding in detention a number of people for the incubation period of a disease has also been questioned. The only reason this feature of quarantine is retained is because our local health administrations thruout the country cannot be

wholly depended upon to keep under medical surveillance the passengers disembarkt from an infected vessel.

Quarantine, as now understood by sanitarians, may be defined as the measures necessary to prevent the introduction or spread of communicable disease. The measures include those of exclusion, detention, observation, segregation or isolation of persons, the disinfection of vessels and trains and the exclusion or disinfection of freight and personal effects.

Different countries have different quarantine procedures. The reason for this is that measures of quarantine are shaped in some degree by commercial and political expediency and to some extent by the geografic position of the country. Also, it must be remembered that a country quarantines only against diseases from which it is free or relatively free. Thus, in India where bubonic plague is endemic, no particular measures are taken to prevent the incoming of this disease. Manila has strict measures intended to guard against the introduction of plague, cholera and smallpox, while Eastern Asia apparently exercises no supervision over shipping with regard to these diseases.

That the geografic position may greatly modify quarantine measures is exemplified by England. Of the three quarantinable diseases recognized in Europe two, plague and cholera, have their endemic homes in Asia while the third, yellow fever, is indigenous in the West Indies and adjacent shores of the Caribbean Sea. From the latter England is protected by the fact that the stegomyia mosquito, the carrier of yellow fever, is unknown within her borders. From the two Asiatic pestilences she is guarded by the strict quarantine stations situated on the Suez Canal, and also by the length of time it takes a vessel to complete a voyage from the Orient.

Moreover, the internal organization of England's public health administration is such that she feels able to cope with any imported cases of these two diseases. She does maintain, thru port medical officers, an inspection somewhat similar to that of our own country. Suspected vessels are boarded and inspected for cases of quarantinable disease, and if any are found they are removed to isolation hospitals. The remaining passengers are

allowed ashore, but by reason of the well organized local health system they are kept track of until a period of ten days has elapsed or until they have left the country.

In this way it will be seen that England does have a quarantine system in the sense that the word is now used, *viz.*, measures looking to the prevention of the introduction or spread of communicable disease.

In our own country the history of maritime quarantine is that of commerce and yellow fever. It was an epidemic of yellow fever in 1669 in Philadelphia that gave rise to the first recorded act in America, entitled "An Act to prevent sickly vessels coming into this Government."

From that time various quarantine acts were past by the different colonies and states, and controversies raged as to the value of quarantines as protectiv measures, and ever yellow fever was shown by one side to be indigenous and by the other to be imported. Various inconsistencies, abuses and impositions crept into the administrations of local quarantines, and it was not until Congress enacted the law of 1893, asserting the right of the Federal Government to control the quarantines of this country, that order began to appear out of the chaos of bitter controversies.

Efforts have been made to standardize quarantine measures by international conferences. The Paris convention of 1903, ratified in 1907, and revised in 1911, was signed by twenty-three countries, including the United States. The diseases to which this convention applies are plague, cholera, and yellow fever. To these three diseases the United States, in its quarantne procedure, adds three more, *viz.*, smallpox, typhus fever and ileprosy.

Before discussing the organization of the United States quarantine, permit me to quote Dr. W. Perrin Norris, the director of quarantine of Australia, who in 1912, in a report on various quarantine systems, says:

"The quarantine organization for the prevention of the introduction into the United States and its dependencies of disease from oversea and its spread from state to state must, in my opinion, be admitted to be the best conceived and most com-

plete in the world. It exemplifies the most logical application of the principles of quarantines."

The quarantine system of the Federal Public Health Service comprises a sanitary supervision of vessels at foreign infected ports thru medical officers attacht to the United States consulates, an inspection and examination at all ports of entry, with well-equipt quarantine stations on all sea-boards, the issuance of port sanitary statements to outgoing vessels, and the execution of regulations regarding interstate commerce and travel.

It is difficult to pick out in a well-organized system any one fase as the most important, but I would be inclined to give great credit to the work of our officers stationed in foreign ports. While they have only an advisory authority they are in a position to save commerce a great deal of embarrassment. Being familiar with the sanitary condition of their ports and contiguous districts, they are able to recommend measures that enable vessels to avoid bringing in quarantinable diseases. They inspect and certify to the condition of freight, and, being familiar with the localities whence the freight originates, they are able to discriminate in a manner impossible to the quarantine officer at the port of entry. They inspect the vessel, crew and passengers prior to sailing and, when necessary, observe under detention and isolation intending passengers for ports in this country. They supervise the fumigation of vessels to kill vermin and certify to the same, when satisfactorily done. They certify to the bills of health without which a vessel cannot legally enter a port in this country. These documents are most valuable. They give a sanitary record of the vessel and of the port where issued, reporting the number of cases and deaths of epidemic diseases occurring in the preceding two weeks.

Having past thru this first process of sifting out infection, the vessel departs on its voyage to the United States. The Service has issued regulations regarding sanitary measures to be observed during the voyage, the compliance with which will prepare the vessel for quick discharge thru the second process of sifting, the quarantine inspection at the port of entry.

This quarantine inspection is made between the hours of sun-

rise and sunset. Immediately on anchoring, the vessel is boarded by the inspecting medical officer, who proceeds to assure himself of the condition of the vessel by a personal inspection of the papers, individuals and vessel.

Guided by the conditions aboard, the quarantine officer either grants her free pratique, provisional pratique, or places her in quarantine. In the first case, she proceeds to the wharf as a safe risk. In the second case, she also goes to the wharf but during her stay in the harbor certain precautions are to be observed to prevent vermin being landed. In the third instance the vessel proceeds to the quarantine station, discharges her crew and passengers, is disinfected and a clean crew put aboard, and the ship is then turned over to the owners. The crew and passengers remain at the station until in the opinion of the quarantine officer they are free from danger of conveying the disease for which the vessel was quarantined.

Speed is the word of this age. With ever-increasing power vessels cut hours and days from the time between ports. Today, special trains wait at the dock the arrival of a transpacific vessel. Valuable cargo is swung from vessel to train and hurried on its way across the continent. In every department the details are timed to the minute. Can one wonder then that everyone resents the delay of quarantine? Consider for a moment the position of the quarantine officer; on the one side are all the powers of commerce and wealth urging him to hasten the discharge of the vessel; on the other, stand the grim spectres of disease and death warning him to go slow. Fortunate, indeed, is he who can coolly consider the conditions and, uninfluenced by either fear, render his best judgment.

The discoveries of modern medicine regarding the spread of diseases are welcomed by no one more heartily than by the conscientious quarantine officer. That yellow fever, typhus, and plague were generaly spread by vermin and not by contact or fomites was a welcome dictum to the officer of the port. It gave him a definit object to attack and simplified his duties considerably. The old shotgun method of treating germ infection was replaced by definit measures directed to a definit end. He no longer seeks

to destroy all germ life, frequently to the damage of vessel and freight, but is content to kill all vermin, feeling confident that he is removing thereby the source of a possible epidemic of plague, yellow fever, typhus, and who knows what other diseases. The commercial man, too, is interested and now coöperating. When one shows him, step by step, the connection between the germ, parasite, and man he readily grasps the idea, and, as no one likes vermin anyway, he is willing to coöperate in measures to clean up his vessel.

Interstate quarantine is establisht only, to quote the Act of March 27, 1890, "whenever it shall be made to appear to the satisfaction of the President that cholera, yellow fever, smallpox or plague exists in any state or territory or in the District of Columbia, and that there is danger of the spread of such disease to other states, territories or the District of Columbia." The Act of 1893 allows the Federal Government to administer the regulations for the suppression of epidemics within the states themselves under certain conditions. That these procedures are wise and worthy has been shown repeatedly in recent years. And it is hoped that the last vestige of medieval quarantine—the shotgun quarantine—will no more be seen in our country. I was forcibly reminded of the influence that modern quarantine has on commerce by seeing recently on a wharf in San Francisco a train of cars, each car of which bore a card certifying to the fact that the car and its contents were free from contagion of bubonic plague and bearing the signature of the medical officer in charge of the plague-suppressiv measures in New Orleans.

Thus, trade between a city or state afflicted with a disease and the rest of the country may be made safe thru the application of modern ideas of quarantine. And such it is hoped the future may bring to pass in maritime quarantine. Outgoing quarantines are along the same lines. Passengers, freight and vessels are inspected, held under observation, if necessary, fumigated or disinfected as may be required and certified to, so that quarantine endeavors to guarantee to other ports that the vessel and its contents are free from danger of carrying the disease.

In this way it may be seen that quarantine is no longer a hin-

drance to commerce but on the contrary a decided aid. In no other way would it have been possible for New Orleans to have continued her trade uninterrupted than thru modern quarantine methods.

In just such measure as our quarantine service is supported and recognized and its efficiency demanded at home will its influence and authority be recognized abroad. Cholera in the Mediterranean in 1910 and 1911 carried with it no interruption of trade at Atlantic ports, due to the coöperation of quarantine officers in Italy and this country.

Sooner or later to every quarantine officer there comes the illuminating idea that there really ought to be no excuse for his position. If every community had a proper health organization and administration, each vessel with its passengers and freight would be clean and free from all danger of spreading disinfection. Commerce would no longer be smircht with the taint of disease, and trade between communities would be freed from the restrictions of quarantine. We know enuf to-day of the causes, modes of spread and prophylaxis of the quarantine diseases to wipe them out. Universal vaccination would remove smallpox from the category of pestilences. Proper disposal of fecal matter and safe water supplies would render the spread of cholera impossible. To wipe out yellow fever we have but to destroy the mosquito. With the destruction of rodents or, failing that, the rat-proofing of buildings, sanitary disposition of garbage, etc., bubonic plague ceases to be a wide-spread terror. Personal cleanliness and sanitary housing will give to vanishing typhus fever its final blow. The day may come, however, when commerce will be freed from all restraints of quarantine, but only when commerce has freed herself from disease.

When we once understand that quarantine is only an attempt to prevent the evil results of faulty sanitation entering our country thru commerce we will have a clearer understanding of how an end is to be put to quarantine. The first step is to do some sanitary sweeping before our own door. Every case of typhoid fever is a reproach to the place it arose in, and the amount of typhoid might be taken as an index of how serious an epidemic

of cholera would be. The amount of malaria in a community may be taken as an indication that were conditions proper, yellow fever would prevail to an equal or greater degree. It is not within the province of this paper to go into the ways and means of how these sanitary reforms are to be brought about. I merely wish to present this idea to this Society, believing that it belongs peculiarly in its province: The one reason for quarantine is that disease attaches itself to commerce and has done so since trade began; the proper sanitation of communities would remove disease from commerce and quarantine would die out; the place to begin is at home.

Sentiment has probably no place in commerce and yet no activity of man can escape it. The sanitary work done by the United States in Cuba, in the Canal Zone, and in the Philippines, has had a far-reaching effect on the pride of other countries, and the spirit of emulation is spreading all thru the tropical world, and I believe we may confidently look forward to the time when the Panama Canal will not only bind countries closer commercially, but the sanitary lessons there exemplified will strengthen the work of each health officer and sanitarian the world over.

ARE THERE HARMFUL AND HARMLESS HOOKWORM INFECTIONS?[1]

By Victor G. Heiser, M.D., formerly Director of Health of the Philippine Islands, Manila; Director for the East, International Health Commission of the Rockefeller Foundation.

Of the disease producing capabilities and of lessening the working efficiency among the people of the Southern States, Porto Rico, and many other places, there is now sufficient evidence to leave little room for doubt that hookworm infection is an important factor. The experiences in Java, the Federated Malay States, the Straits Settlements, and the Philippines, apparently show that hookworm of the harmful type is found from time to time, but on the other hand they also show that hookworms of both the old and the new world variety are often present in the human intestines without giving rise to any special symptoms.

In the Philippines, for instance, it was found in Bilibid prison in 1907 that the death rate among approximately 3000 prisoners was about 80 per thousand per annum. The conditions in the prison had been made hygienic. The ration was carefully corrected by a competent physiologist; the water supply, drainage, disposal of human wastes, ventilation, were made to conform to modern principles of hygiene and sanitation. All of this resulted in a considerable lowering of the mortality rate but it could not be reduced below 80, which was excessiv. The prisoners were then examined for hookworm and other intestinal parasites, approximately 60 per cent. were found to harbor hookworm, and over 90 per cent. had some form of intestinal parasite. Treatment to eliminate all varieties of parasites was at once begun. The prisoners were quartered in brigades or groups of about 300. As soon as the treament of one brigade was completed there was an immediate reduction in the morbidity and the mortality dropt to 10 to 12 per thousand per annum, while the morbidity and the mortality in the untreated brigades remained as high as before. One brigade after another was treated and when the last

[1] Read by title at the 40th Annual Meeting of the American Academy of Medicine, San Francisco, June 26, 1915.

was completed the mortality rate for the entire prison was approximately 12 per thousand per annum. It was naturally thought that if such truly marvelous results could be obtained among prisoners, equally good results might be had by treating the general population. In order to test this matter thoroly a commission was formed composed of members of the Philippine Medical School, the Bureau of Science, the United States Navy, and the Bureau of Health.[1] The commission selected for study the people of the inland town of Tay Tay, located about 20 miles from Manila and not affected by tides or salt marshes. Several thousand persons were examined and an average hookworm infection of about 12 per cent. was found and about 90 per cent. of those examined had some form of intestinal parasite. All infected persons were treated. There was, however, no apparent reduction in the morbidity and no reduction in the mortality. Observation extended over a period of several years. Studies of the causes of death did not show the presence of any unusual disease, so there was no known factor to offset any possible gain which might have been brought about by the elimination of the intestinal parasites. It is perhaps well to state treatment was administered for any other disease that was found. The only striking difference between the infections at Bilibid and at Tay Tay was the reduction in the percentage of hookworm infection: at Bilibid it was approximately 60 per cent., whereas at Tay Tay it was 12 per cent. The percentage of infection with other parasites was about the same.

In order to test this matter still further, the Bureau of Health had about 10,000 examinations made among the people of the sea coast town of Las Piñas and vicinity. The results were practically the same as at Tay Tay. The town of Tuguegarao, located on a large navigable river and about a hundred miles inland, was next selected. The results were again practically the same. Work was continued in other towns until a total of about 25,000 persons were examined. The results still remained

[1] Full reports of the work of this commission may be found among publications of the Bureau of Science.

unchanged. In the same valley in which Tuguegarao is located, laborers numbering about 500, at work on a plantation, were reported to be unusually lazy and that much sickness existed among them. They were examined and approximately 65 per cent. were found infected with hookworm and about 80 per cent. had other intestinal parasites. They were treated and results comparable with those of Bilibid were obtained.

Reports of hookworm infection without symptoms then began to be received from Queensland, the Federated Malay States, Straits Settlements, and this year Java reports similar cases. But on the other hand Ceylon and Egypt reported hookworm infection with symptoms similar to those found in the Southern States and Porto Rico.

Hookworm work in the Philippines except in Bilibid prison, among arriving aliens, and patients in hospitals usually from other causes, has for the present been discontinued as a public health measure, because the money used in combating hookworm infection will produce greater results in other lines of endeavor.

From the foregoing it is obvious further inquiry into the effects of hookworm infection is highly desirable so that the whole subject may, if possible, be placed upon a more scientific basis. It is most important for the health official charged with the responsibility for the public health and the wise expenditure of public funds, to have reliable information, whether the control of hookworm is to be undertaken or whether some other activity should be given preference.

With the hope of throwing some light upon this important question the International Health Commission has appointed a board composed of Drs. Darling and Barber of the United States and Dr. Hacker of the British Colonial Medical Service to make a thoro study of the question. The Board has commenced its labors in the Federated Malay States and later will probably continue its investigations in Java and the Philippines.

On account of the very general public interest in this matter, and in order to have as many data available as possible, the International Health Commission, 61 Broadway, New York City,

will welcome any information medical men from any part of the world may care to send.

DISCUSSION.

Dr. Woods Hutchinson, New York:

The subject is one of the most important and most vital we have to face. If any proof were needed, the statement that 60 per cent. of the Chinese coolies examined were found infected with hookworm ought to be quite sufficient. Examination in the Marine Hospital and by the Public Health Service at the point of embarkation and upon entrance here is going to protect us from an immense amount of disease.

I am glad there is a prospect of what was suggested in Dr. Blue's paper. We ought to have a school of tropical medicine and there is no finer place for it than in California.

We are going back to the tropics. We began there in the beginning, and it was a mighty good place to migrate from. Those of us who have remained in the tropics have remained savage, stupid, half civilized, because we were bitten and bost by insects, bugs and worms and infected with all sorts of disease. Now we are going back to reoccupy and reconquer for the white race those great fertile stretches of country in which we originally grew up. Hitherto our success has depended largely upon the degree to which we have separated ourselves from that district.

We have a more or less natural self-acting protection against many of these tropical diseases. Hookworm we find to be one of the ordinary appendages of humanity in the thirty degrees of latitude north and south of the Equator. That belt entirely around the earth is infested with hookworm and humans just about in equal proportions, forming about one-third of the human race. The study of the American hookworm has revealed it to be one of the most curiously fascinating fruits of justice of the crimes of man. Strange as it may be, as soon as it was thoroly described, it was found to be identical with the Necator African brought here with the African slaves, and it has remained to be a scourge to the man who captured them. The best protection against hookworm is good shoe leather. It is a barefoot disease, and I have a strong suspicion that some of our feeling as to the disrespectability of going barefoot is a remnant of some ancestral feeling of this sort.

Against plague also we have a protection and against typhus fever, and that is a clean undershirt. The undershirt should be changed several times a month, with profuse bathing. A clean undershirt is the best health-protector that we have invented and will protect us from more evils than any known weapon.

So, while I think we ought to take every precaution to fight off and keep out these infections, at the same time, we are not without resources of protection against them if they should be imported into our midst.

Dr. Philip King Brown, San Francisco:

I would like to ask Dr. Gunn whether the examination of stools of people coming from the Orient is confined to any special class. Do the first cabin passengers have to submit to such examination? If not, why not? Among the discharged soldiers from the Philippines, a very large number are infected, or were in the earlier days. It used to be no uncommon thing to have 90 per cent. of the men admitted to the County Hospital who had served in the Philippines still infected with hookworm.

Dr. J. W. Kerr, Washington:

We are having constantly imprest upon us the importance of transportation in relation to the health of the people; especially has the recent enormous immigration presented problems which the Public Health Service has endeavored to meet. Last year, out of approximately 1,500,000 immigrants reaching the United States, over 38,000 were certified for deportation. This number could have been greatly increast by more extensiv examinations. These are being discust widely to-day, and it has even been a question in the minds of the officers engaged in making these examinations whether eventually the same standards should not be prescribed for those who are candidates for citizenship as for those who are selected to enter the army and navy in the defense of the country.

It must be borne in mind, however, that many of the diseases among immigrants which have recently attracted our attention are not new in our country. Within a period of ten years, some of the most important diseases which confront us to-day have been discovered as endemic here, altho they had been hitherto regarded as exotic. I may mention filariasis and Malta fever, which have been discovered in the recent past in the Pecos Valley and other sections of the South. Trachoma has been discovered among the oldest American population, where it is widely prevalent. 22.7 per cent. of 39,231 Indians examined by officers of the United States Public Health Service in 1912 were shown to be suffering from trachoma. Lastly, I may mention the discovery of pellagra in 1907, a disease which since that time has attracted general attention and is, perhaps, the most serious disease, from an economic and public health standpoint, in the South.

I think bodies of this kind can help to crystallize the public's views as to what steps should be taken toward the absolute prevention of these diseases. They can also mold public opinion as to how rigid immigration examinations shall be, always bearing in mind, first, the protection of the public health and, second, the encouragement of international relations.

Dr. Philip King Brown:

I would like to ask Dr. Blue if it is true, as stated in "*Osler's Practice*" that 10 per cent. of the deaths from pulmonary disease are due to the dis-

toma Westermanii and whether it has ever been discovered in natives of this country, or among the Japanese dying in this country.

Dr. Rupert Blue:

I do not know of a single case of paragonamiasis having originated in this country. It is possible, however, that the infection might have been brought over by Chinese and Japanese immigrants.

Dr. George E. Ebright, San Francisco:

The California health authorities are very much awake to the importance of the subject of Dr. Gunn's paper. A complete survey of the situation in the state has not yet been made. The recent legislature, however, has provided means at the hands of the State Board of Health and it appears that the hookworm problem in California will be successfully workt out. The chief foci of infection are among certain of the mines in Amador County where the health authorities have met with every desirable cooperation upon the part of the mine operators.

Dr. Herbert Gunn, closing:

In regard to the question Dr. Brown askt, of course, the class of people he mentioned, the soldiers, do not come under the jurisdiction of the immigration authorities. It is an unfortunate fact, and a very weak link in the chain of protection against Oriental diseases, that only certain classes, those who are aliens, are subject to examination. Even among the Chinese and Japanese, many cases carrying oriental disease may step out of the immigration hospital and come to San Francisco. If a man is a citizen or a domiciled alien he is allowed to land regardless of disease. Those are matters that should be taken up by the State Board of Health, especially in California, and these people should be turned over to them for their attention.

Some of the diseases that Surgeon Blue mentioned are very interesting and will be found more prevalent than in the past. In the last two years I have made something like seven or eight hundred examinations of Chinese for certain diseases, and have found that the *clonorchis sinensis* that Dr. Blue mentioned was carried by about 20 per cent. of the Chinese coming into the country. I also find that it is one of the greatest causes of disability among the Chinese, next to hookworm.

FROM THE FIELD.

The time is past when the meetings of the Pan-American Congress receive little attention in this hemisphere except from the diplomats, government employees and the interested population in the cities where the Congress may meet. A few years ago Pan-Americanism appealed to the average man as being an academic question, a desirable thing to be sure, but pressing to a very few. Now, however, all thinking men realize that the solidarity of the Americas will soon be a vital issue.

The Pan-American Scientific Congress, which met in Washington City in January, in this light was very important. Four official languages were used; besides the English, Spanish and Portuguese were spoken by some of the representatives from South America, and French by some of the representatives from Haiti. Delegates from scientific bodies and from the leading colleges of the country were present. As a result of the discussion on education, arrangements will probably be made for a system of exchange professorships between North and South America, and the establishment of courses of training in colleges for young men going to countries other than their own. Questions of international law were taken up and also the many problems which are handled by enlightened government that a generation ago were left almost entirely to the individual.

The report of Dr. John B. Roberts, the delegate of the American Academy of Medicine to this Congress, will be found below in advance of its presentation to the Academy.

* * *

REPORT OF THE DELEGATE OF THE AMERICAN ACADEMY OF MEDICINE TO THE SECOND SCIENTIFIC PAN-AMERICAN CONGRESS.

The Second Scientific Pan-American Congress met in Washington from December 27, 1915, to January 8, 1916. The first Congress met in Santiago, Chile, in December and January, 1908–1909.

The Executiv Committee included in its membership Dr. William H. Welch President of the National Academy of Sciences,

and Surgeon-General William C. Gorgas, of the U. S. A. The presence of these well-known medical men in the governing board insured the interest of the medical societies of the United States in the work of the Sections on Public Health and Medical Science and on Education. The Congress included representatives of the Republics of North, Central and South America, who had come as official delegates, representatives of universities and other scientific bodies of the countries represented, and citizens of participating countries invited by the Executiv Committee because of their well-known standing in scientific pursuits.

It was estimated that there were more than a thousand members of the Congress present, the presiding officer of which was the Ambassador from Chile. The Hon. John Barrett, Director-General of the Pan-American Union, was Secretary-General, and Glen Levin Swiggett, Assistant Secretary, and to these two gentlemen the Congress, to a very large extent, owes its success. Indeed, Professor Swiggett, of the University of Tennessee, became ill at the beginning of the Congress because of his unselfish devotion to the detail work of the business side of the organization.

The Pan-American Union Building was not large enuf for the sessions of the Congress, which were, therefore, held in the building of the Daughters of the Revolution. The Carnegie Institut and the Clubs vied with the Secretary of State (Mr. Lansing) and other officials in making the foreign gentlemen and their wives enjoy social meetings, as well as the scientific proceedings of the nine sections. The most important social functions were, naturally, the address of President Wilson and the reception given by him and Mrs. Wilson at the White House at the close of the Congress. The list of sections will show the wide range of scientific discussion that occupied the time of the delegates. They were:

1. Anthropology.
2. Astronomy, Meteorology, Seismology.
3. Conservation of Natural Resources, Agriculture, Irrigation and Forestry.
4. Education.
5. Engineering.

6. International Law, Public Law and Jurisprudence.

7. Mining and Metallurgy, Economic Geology, and Applied Chemistry.

8. Public Health and Medical Science.

9. Transportation, Commerce, Finance, and Taxation.

There were fifteen scientific organizations meeting at the same time in Washington; this enabled the Congress to have in its membership, probably, many persons who otherwise might not have come to Washington. As a result of this fortunate arrangement the most important officials and scientists of Central and South America came into contact with officials and scientific men of the United States in a most enjoyable manner. In many of the societies and sections, other than that of Public Health and Medical Science, there were subjects discust of great interest to medical men. The sociologic side, naturally, was the most interesting to the readers of the JOURNAL OF SOCIOLOGIC MEDICINE. Many questions in regard to medical education in South American countries and in the Spanish States of Mexico and Central America were given consideration. Several medical men from Pennsylvania took part in the deliberations and were down on the program for papers. The international problems discust by the legal members and those in high official station naturally attracted most attention on the part of the newspaper press. Abstracts of these discussions have, therefore, been widely read. Yellow fever, beri-beri and similar topics claimed much attention from the Section on Public Health. The feeling of brotherhood between the American Republics was undoubtedly increast by the cordial reception given Portuguese and Spanish delegates by their scientific and medical confrères in the United States. As is usual, Washington was fully alive to the importance of the occasion and took good care that the ladies accompanying the delegates were given opportunities to see and know the beauties of the capital city. Those of us who usually see Washington in the Spring at medical conventions, when it is so beautiful with green grass and horse-chestnut trees in blossom, were astonisht to see a severe snow-storm and ice-covered streets during the Congress.

JOHN B. ROBERTS,
Delegate.

NATIONAL AMERICANIZATION COMMITTEE AND ITS NATIONAL CONFERENCE ON IMMIGRATION AND AMERICANIZATION.

Report of representativ to the meeting on Americanization.[1]

In Philadelphia there was held on January 19 and 20, 1916, an important conference of persons interested in the immigration problems presented by the influx of European nations for industrial purposes in the United States.

The Conference met at the invitation of a self-constituted committee of earnest women and men who had come to believe that students of sociology as an academic topic and practical philanthropists could learn and be taught much by hearing the views of large employers of labor and of state and federal officials. They had also concluded that employers and officials can be benefited by contact with those whose views were untinged, so to speak, by business requirements or legal regulation and official points of view.

The programs, literary, social and argumentativ, were of much interest and of undoubted value. Much space was given to the discussions in the local newspapers; and much valuable information was accumulated for subsequent study by those registered as in attendance. The committee is to be congratulated upon awakening such a response from authorities, literary, official and corporate, since writers, employers, and officers of the highest professional and social character took an activ part. Not a little of the value of such conferences comes also from the informal social chats possible at the luncheon table and in the reception salon. Mr. and Mrs. Edward T. Stotesbury and their associates deserv and received many plaudits for the judicious and efficient manner in which the Conference was initiated and carried to a satisfactory result.

JOHN B. ROBERTS,
Representativ of American Academy of Medicine.

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Dr. Edith R. Spaulding, of the Reformatory for Women at Framingham, Mass., read a paper at the meeting of the American

[1] Printed in advance of its presentation to the Academy.

Prison Association, held last October, on "Our Criminal Problem from the Standpoint of Classification and Segregation." She asserts at the start that the problem of prison reform is becoming more and more one for the medical profession to help in solving. That while environment and training are important factors their true value cannot be determined without a diagnosis of the individual delinquent, both physically and mentally. The efforts that reformed hitherto without such aid have not been encouraging as is shown by a large percentage of recidivists. This paper is based upon a study of 500 women in the Massachusetts Reformatory in which the conclusions are reacht that the treatment of delinquents is a question of the individual rather than that of the crime committed. As the result of her study she divides the inmates into three classes, those who should be permanently segregated, those who should receive partial segregation with a truly indeterminate sentence, and those who may be paroled. She objects to the present indeterminate sentence, which is more accurately named indefinit sentence, as an indeterminate sentence should be without maximum or minimum. Based upon this classification she analyzes the 500 cases referred to, illustrating by citing individual cases and demonstrates the advantage of the laboratory method over the present method of procedure. We quote her conclusions:

If the criminal problem is one of treatment of the individual for his deficiencies rather than of punishment for the crime committed, the following fundamental provisions for the administration of such treatment are necessary:

1. Adequate provison by the state for the permanent custodial care of all committable cases of mental defect whether or not they have a court record.

2. The establishment of laboratories in our courts and correctional institutions for the study and diagnosis of all offenders.

3. The equipment of all our institutions with facilities for classification and treatment of the various types which will remain even after the removal of the most defectiv. Such a classification will necessitate separate buildings, at least one of which should be equipt for hydro-therapy.

4. The adoption of an indeterminate sentence, which shall enable us to treat patients until they are able to return with safety to the community.

The physician has it in his power to do much towards educating the public

to the need of fundamental measures of reform and towards counteracting the tendency toward superficiality of some enthusiastic believers in *universal* reform. His knowledge of mental and physical defect enables him to see more than the cross-section of the subject, which is represented by the population at present confined in our penal institutions, and to appreciate the social and economic waste which is the result of our past neglect of generations of inefficients in the community.

* * *

We glean from the Journal of the Kansas Medical Society for November, 1915, that Commissioner W. L. Porter, of Topeka, has evolved a plan for the medical care of the sick poor that is worthy of study to the end that it may be adaptable to other cities. The plan abolishes the city and county poor physicians and establishes a charity medical fund with the money appropriated for their salaries and expenses. This fund is placed at the disposal of the county medical society to be disposed of by it in the payment for medical attendance upon the sick poor. Each physician would answer emergency or charity calls and take full charge of the cases coming to him. These he would report to the county society with his investigation as to the ability of the patient or patient's family to pay any of the expense of treatment. This report would be reviewed by the county society (probably thru a committee) and the appropriations made from the medical charity fund, either in full or in part payment for the medical services rendered to the patient, depending upon the ability of the patient to pay or not to pay his doctor in part. It seems to us that the principles involved in this scheme could be adapted to many parts of the country and be instrumental largely in abating the abuse of medical charity.

Commissioner Porter also suggests that city and county health officers be appointed who shall be whole time officials, spending their time in studying conditions and applying preventiv remedies but should not treat individual cases excepting in unusual emergencies.

* * *

The Russell Sage Foundation has just publisht a pamflet by Franz Schneider, Jr., Sanitarian for the Department of Sur-

veys and Exhibits, on "A Survey of the Activities of the Municipal Health Departments in the United States," which covers a survey of the municipal health department activities in each of the 227 cities of the United States having a population of 25,000 or more, and the conclusion is reacht "That public health work in this country is still in its infancy." We find that Seattle leads with the largest per capita expenditure ($0.98), while Clinton, Iowa, has the smallest (0.0¾); that the health departments of the larger cities are stronger than those of the smaller cities. Instead of the average of $0.22 per capita which is expended in this work the survey suggests a minimum of $0.50 per capita. We quote the following facts from the pamflet:

A fifth of the cities made no inspection of school children; over a third did not offer the ordinary laboratory diagnosis for the commmoner communicable diseases; over a fourth made no effort to educate in health matters; nearly three-fourths had no housing law; nine-twentieths had no concern with the hygiene of industry; over six-sevenths had no program against venereal diseases; over a half had no proper organization to combat infant mortality; and less than a quarter had a coherent program against tuberculosis.

* * *

LUNCHES FOR THE RURAL SCHOOL. Extension Bulletin No. 32 of the University of Nebraska College of Agriculture.

The aim of this Bulletin is to assist the busy rural teacher in instructing the pupils in the art of cooking and in doing this it serves a twofold purpose, for it not only provides the scholars with a warm lunch at noon, thereby increasing their efficiency in the afternoon studies, but it also provides the potential homekeepers of the future with knowledge which many homes fail to provide. The Bulletin gives a very complete plan for establishing such lunches in the rural schools along with a number of recipes and should prove helpful to both teacher and scholar.

NOTES AND NOTICES.

The report of the Medical and Sociological Departments of the Colorado Fuel and Iron Company for 1914–15 is on our table. It is the 34th annual report of the medical department and the 15th of the department of sociology. We glean from the report of the Chief Surgeon (Dr. R. W. Corwin) that more and better

work has been accomplisht in both departments than in any previous year in the history of the Company, which must be largely in preventiv work, as there has been less sickness and fewer accidents. Among the innovations looking towards the prevention of accidents is the employment of a psychiatrist by which a mental examination is added to the physical examination in case of doubtful mentality. The report is lavishly illustrated and demonstrates the trend in modern industrial plants towards conserving the health and welfare of the employe.

* * *

The Executiv Committee of the Council has elected Dr. J. E. Tuckerman, Cleveland, Assistant Secretary of the Academy for the current year.

* * *

The contamination of the atmosphere by smoke fumes and gases is a common experience thruout the country, especially where there is considerable industrial activity. How much of it can be prevented and how much endured is frequently a matter of discussion between the people living about the industries and those concerned with its management, and the arguments employed on either side are frequently but mere matters of opinion. It is gratifying, therefore, to be able to call attention to the report of the Selby Smelter Commission (publisht by the Bureau of Mines at $1.25 a copy) where an independent and expert commission made a careful investigation of the various questions involved and in doing so not only made it possible for the amicable settlement of the discussion between the Selby Smelting and Lead Company and the citizens of Solano County, Cal., but also furnishes an amount of valuable data for the study of similar conditions elsewhere in the United States.

* * *

Number 1, Volume II, of the Illinois Biological Monographs is devoted to "The Classification of Lepidopterous Larvae" and was submitted by Stanley Black Fracker as a part of the trial for the degree of Doctor of Philosophy in the University of Illinois. This study of the caterpillar is both extensiv and thoro

and the biologist is again indebted to the University of Illinois for making it possible to consult the results of his investigation.

* * *

The Secretary wishes to remind the Academy that a number of exchanges are kept on file at the business office for the use of the Fellows. These should be more generally used than they are. They can be obtained by writing to the Deputy Secretary, Miss Elizabeth F. Reed, 52 N. 4th St., Easton, Pa., paying the charges both ways on any numbers desired. The following are the magazines thus obtainable:

American Philosophical Society Proceedings.
American Journal of Sociology.
American Medical Association Bulletin.
American Journal of Care for Cripples.
Archivio Farmacologia.
Bulletin of the New York State Department of Labor.
Bulletin of the New York State Industrial Commission.
Bulletin of United States Bureau of Labor.
Colorado College Publication.
Eugenics Review.
Indiana Bulletin of Charities and Correction.
International Conciliation.
International Journal of Ethics.
Joliet Prison Post.
Journal of the American Medical Association.
Journal of Experimental Pedagogy.
Journal of Ophthalmology and Oto-Laryngology.
Journal of the American Institute of Criminal Law and Criminology.
Judicial Settlement of International Disputes.
La Cronica Medica.
Medical Economist.
National Conference of Charities and Correction Bulletin.
Office International D'Hygiene Publique.
Ophthalmology.
Pioneer of Simplified Spelling.
Social Hygiene.
United States Naval Medical Bulletin.
Volta Review.

* * *

Vermont Medicine is the new claimant in medical journalism, publisht as the official organ of the Vermont State Medical So-

ciety, taking the place of the *Vermont Medical Monthly*, which intermitted publication some little while ago. It is pleasing in its make-up and we hope it will become one of the most successful of the official organs of state societies.

NECROLOGY.

1915. Dec. 15. Michael M. Leahy.
18. A. M. Scheel.

ACADEMY PERSONALS.

Bonney, Sherman G., Denver, and Mrs. Jessie Ellwood Ray were married at St. Louis on December 1st, 1915.

Dixon, S. G., has been elected President for the 21st time and Executiv Curator for the 25th time of the Academy of Natural Sciences, Philadelphia.

Doughty, Dr. William H., was elected Vice-President of the State Board of Health of Georgia, January 11th.

Keen, Dr. W. W., has been elected President of the American Philosophical Society for 1916.

Lane, Dr. Francis, was elected Vice-President of the Chicago Ophthalmological Society on the 17th of January.

Maurer, Dr. J. M., Shamokin, Pa., has been appointed Chief Surgeon of the Susquehanna Coal Company.

Roberts, John B., was elected Treasurer of the College of Physicians of Philadelphia on January 5th.

Vaux, Dr. Carey J., Pittsburgh, was elected Secretary of the Allegheny County Medical Society at its annual meeting on January 11th.

Warden, C. C., has been awarded the C. C. Beach scholarship for medical research in the University of Michigan for a period of one year.

Wilbur, Ray Lyman, was installed as President of Leland Stanford Junior University on January 22d.

GLEANINGS.

THE QUESTION OF CONTRACT PRACTICE.

A letter received recently from an out-of-town physician again raises the question as to the ethics of contract practice of various sorts; in particular "the ethics of men in general practice doing contract work for corporations, lodges, etc." The subject is one that has several angles and, depending on the point of view, may be entirely ethical, or only undesirable, or distinctly bad.

Viewed from the standpoint of the man who must make a living, and who enters practice with scanty resources and no general acquaintance sufficient to assure him maintenance, it comes like a Godsend to acquire a connection with some lodge, or group of employees, or other club, that provides free medical treatment for its members and a small but steady income for the physician. The question may be properly asked, why should not men combine to minimize the expense of their medical care, and why should not a physician accept an annual fee for which he gives his attendance to each member of the lodge as required? Viewed in the abstract there can be few valid objections to such a practice, for it partakes of the nature of industrial benefits and insurances and provides against contingent sickness, which is a matter of wise forethought; and supplies steady employment to a physician. Worked out to its practical conclusion, however, one often finds that the general feeling among the lodge members is one of uncertainty and lack of confidence in the qualifications of the lodge doctor. Almost every physician has had the experience of being called in to administer to a sick patient and of being told that "they have their lodge doctor, but they don't have entire confidence in him." A system such as this must have some intrinsic fault to permit the lodge doctor to be viewed with suspicion by the very people who subscribe for his services; and the question naturally arises, is it the fault of the physician, or of the system, or both? Add to this that the bulk of the profession undoubtedly looks askance at lodge practice and one becomes assured that it is not good, although it is difficult to put one's finger upon the rotten spot and declare just where the trouble lies. It seems unreasonable that the acceptance of a fixed annual retainer should induce criticism of, and foster lack of interest in the man who accepts it, but it nevertheless seems to be true that the lodge doctor is apt to regard his lodge practice as of secondary importance, to give perfunctory service, to use it as a stepping stone to things which he regards as more desirable and to permit himself to fall into a careless routine as regards lodge patients.

What can one say about the service rendered by the employees

of the large insurance companies and civil service appointees in state and municipal positions, such as medical officers of the Department of Health, Police, Fire, and so on, which also comes under the heading of contract practice? It may be argued that these are salaried positions, that they require specific duties and represent a high order of service to the community, but they nevertheless resemble lodge practice in so far as the physician receives a fixed salary and renders specific service. The tendency here, as most men who have tested such employment will acknowledge, is to blunt the keenness of purely professional work and to drop into a sort of departmental routine. These are generalizations and must necessarily find many exceptions, but nevertheless it is approximately true that the average physician tends to deteriorate unless held up by the demands of professional competition. It may be argued that the combination of private practice which the irregular leisure of salaried employment permits a physician, affords him sufficient incentive to keep out of the ruts incidental to routine work. This is probably true for the average man, but unless he has a well developed sense of personal responsibility he is likely to permit the comfort of an assured income to make him a trifle too independent in dealing with private patients, at the same time that the fixed salary tempts him to put forth only enough effort to make it secure. Two factors are essential in making this combination of salaried employment and private practice work together for the best results—an efficient supervision of departmental work to supply the necessary stimulation, and some dispensary or hospital association to keep the individual interest keen and polished. It is manifest by comparison that lodge practice cannot supply the first of these demands and that consequently the lodge is likely to be the sufferer; while, on the other hand, the well established prejudice against lodge practice is likely to prevent obtaining a hospital association.

There is still another class of employment for physicians which must be utterly condemned; the farming out of one's services for a fixed salary or commission to some corporation which pretends to supply medical care to families at a small weekly charge.

The person who pays 10 cents a week for medical care gets 10 cents worth and no more. The physician who gives such service renders no more service than he can help and his privilege of peddling drugs to eke out his salary is itself the strongest sort of a temptation to victimize rather than benefit the patient. While it is possible for a young man without money and without friends, but possessed of unusual moral force to assume such a position for temporary aid and not be mastered by it, such a possibility is improbable, for the very fact of farming out his talents for the commercial gain of some one who is outside of the profession would be the one thing that a young man of really high principles would not do.

There is to-day a very evident trend toward practical socialism in medicine whereby the State is already providing in some measure medical service of good quality for the poor; and there are those who look forward to the time when adequate medical care by the State will become as much a public function and duty as the supply of water and sanitation. The recognition of this need postulates the recognition of present faults in the quality of medical service that the sick poor are now able to command at home and carries an indictment against lodge practice and an argument in favor of medical service through State aid.

H. G. W.

(*From the Long Island Medical Journal, Nov., 1915.*)

LITERATURE NOTES.

THE ADOLESCENT PERIOD. ITS FEATURES AND MANAGEMENT. By LOUIS STARR, M.D., LL.D., Fellow of the College of Physicians of Philadelphia; Fellow of the Royal Society of Medicine, London, etc. Cloth. Price: $1.00, net. Pages, 211. Philadelphia: P. Blakiston's Son & Co., 1915.

In this book the author presents an outline of the physical and psychic changes that are to be expected in the period of life between the end of childhood and adult age, with some of the methods of management looking toward the evolution of adolescence into healthy and useful maturity. The language is not technical and the book is not large. It would be of interest and value to conscientious parents. The six chapters deal with

Growth and the Development of Muscle Power; Physical Education; The Diseases of Adolescence; The Faults and Criminal Tendencies of Adolescents; and Menstruation and Sexual Enlightenment. T. W. Grayson.

Vicious Circles in Sociology and Their Treatment. By Jamieson B. Hurry, M.A., M.D. (Cantab.), Author of "Vicious Circles in Disease." With illustrations. Cloth, 34 pp. $0.80, net. Philadelphia: P. Blakiston's Son & Company.

As in pathology, a vicious circle applies to a morbid process in which a primary disorder provokes a reaction which perpetuates and aggravates all such disorder; so in sociology, a close interdependence of social evils form a circle where the evils become in their turn sources of evil. This work is an effort to show several of these circles with the method of breaking them. Thus, for example, poverty, with its inefficient nourishment, leads to malnutrition, to debility, to diminisht earning power and each of these in turn contribute directly to continuing the poverty. There are similar circles connected with crime, disease and inebriety, etc. These various circles are presented along with the opinions of social workers to show the complex causing of the condition.

As in disease it is necessary to break thru the circle at one point before recovery can commence, so in sociology no treatment will be of permanent benefit that fails to accomplish this object. Suggestions for treatment are next considered. The conclusions are epitomized as follows:

Altho this monograf is far from exhaustiv, enuf has been said to establish several propositions:

Firstly. Many social disorders are complicated by the presence of a Circle.

Secondly. This complication aggravates and perpetuates such disorders.

Thirdly. In order to effectually remedy such disorders they must be analyzed into the reciprocally acting factors. This will facilitate the discovery of the *locus minoris resistentiae.*

Fourthly. Since every gyration deepens the groove and makes escape the more difficult, the social reformer must ever bear in mind, and act upon, the aphorism of Cicero: "Every evil is easily checked at its beginning: if allowed to grow it gathers in strength."

Charles McIntire.

Annual Report of Department of School Hygiene of the Board of School Directors, Milwaukee, Wisconsin, 1915.

We have commended the work of the medical department of the Milwaukee public schools upon noticing the previous reports. The change in name to Department of School Hygiene has not lessened the activities of the Department. Unfortunately the present report is made up largely of charts and statistical tables, which do not lend themselves for review. It would be well for school districts contemplating the introduction of medical inspection or improving their present system to consult this Department for pointers.

Report of the Medico-Military Aspects of the European War. From observations taken behind the allied armies in France. By Surgeon A. M. Fauntleroy, U. S. Navy Instructor in Surgery, United States Naval Medical School, under the direction of the Bureau of Medicine and Surgery, Navy Department, Washington, D. C. Washington: Government Printing Office, 1915.

This profusely illustrated little volume treats mainly of the medical work of the allies in France, describing their military organization and equipment (organization of fighting units, grenades, machine or rapid fire guns, ballistics and asphyxiating gas); the organization for the transportation and care of the sick and wounded; base hospital work (gas-bacillus infection, dental surgery, injuries to the nervous system, pathologic considerations in base hospital work) and general field conditions. The three appendices comprise a paper read by Dr. H. D. Dakin before the French Academy, a consideration of the French army ration and a description of the French "75." T. W. Grayson.

Public Health Report of the Secretary of the Treasury.

Several subjects of great interest to the American Academy of Medicine are toucht upon in the annual report of the Secretary of the Treasury as it relates to the Public Health Service.

It contains numerous recommendations bearing on the functions of that organization and evidences the great interest of this department in the extension and expansion of the governmental agencies for the protection of the public health.

In the development of general public health work, according to the Secre-

tary, there is great need of additional medical officers. The number of requests for advice and assistance in health problems received from states and municipalities during the past year has far exceeded that in any similar period in the history of the Service, but the limited number of officers available for the work has prevented in many instances compliance with these requests.

The field investigations, the Secretary states, have served as a stimulus to state and local health agencies, and every effort should therefore be made to encourage and turn to practical account the interest in health matters awakened in the general public. For this reason an increase in the appropriation for field work is requested.

An additional building for the Hygienic Laboratory is urgently needed. The work of this institution has been greatly extended, particularly as it relates to the examination of viruses, serums and analogous products, a vast market for which has been recently created abroad. The safeguarding of these therapeutic agents requires great accuracy and precision and overcrowding is a serious handicap. In order that the public health may be better protected, an annual appropriation of $25,000 is recommended to be expended in carrying out the provisions of the law relating to the examination of these products.

The United States is the only government of importance which does not provide for the care and isolation of lepers. The establishment of a national leprosarium where the numerous lepers, most of whom are native born Americans, may be properly segregated and treated, thereby eliminating a menace to the health of others, is urged.

ACKNOWLEDGMENTS.

[It is intended to acknowledge all reprints received since the issue of the last number that are not otherwise noticed. The present list records the publications received (other than periodicals in exchange) from November 30, 1915, to January 28, 1916, inclusiv.]

This acknowledgment is considered a full return for the courtesy of sending us the publication. Additional notice will be given when space permits. Publications treating of medico-social questions will be given precedence in the fuller notice.

U. S. Bureau of Labor Statistics: Bulletin No. 180, The Boot and Shoe Industry in Massachusetts as a Vocation for Women. Bulletin No. 181, Wholesale Prices, 1890 to 1914. Bulletin No. 185, Compensation Legislation of 1914 and 1915. Monthly Review, Volume I, December, 1915, No. 6. Monthly Review, Volume II, January, 1916, No. 1.

U. S. Bureau of Mines: Technical Paper No. 105, Pulmonary Disease among Miners in the Joplin District, Mo., and its Relation to Rock Dust in the Mines. Technical Paper No. 116, Miners' Wash and Change Houses.

U. S. Department of Agriculture: Bulletin No. 260, The Dog as a Carrier of Parasites and Disease. Bulletin No. 340, Experiments in Vaccination

against Anthrax. By Adolph Eichhorn, Chief of the Pathological Division.

Report of the United States Commissioner of Education for the Year ended June 30, 1915, Volume I.

Russell Sage Foundation, Department of Surveys and Exhibits: Activities and Publications, December, 1915. An Effectiv Exhibition of a Community Survey: A brief description of the Springfield Survey Exhibition. An Effectiv Exhibition of a Community Survey: A survey of the Public Health Situation, Ithaca, N. Y., 1914.

Metropolitan Life Insurance Company: How to Live Long. Hookworm Disease and how to Prevent it. Malaria, its Cause and how to Prevent it.

Public Health Administration in Richmond, Ind. A report of a survey to determine the incidence of tuberculosis. By J. C. Perry, Senior Surgeon, U. S. P. H. S.

National Committee for the Prevention of Blindness: Trachoma:—Its prevalence, its effects upon vision, and the methods of control and eradication.

Eugenical News, Volume I, No. 1, Jan. '16.

American Society for the Control of Cancer: The General Practitioner's Responsibility in the Early Diagnosis of Cancer.

Annual Report of the Surgeon General of the Public Health Service of the United States for 1914.

Annual Report of the Rockefeller Foundation, 1913–14.

Forty-sixth Annual Report of the Board of State Charities and Corrections of Rhode Island, 1914.

Social Service Review, Dec., 1915, Jan., 1916.

Child Betterment and Social Welfare, Dec., 1915, Jan., 1916.

Official Congressional Directory of the 64th Congress, 1st Session, December, 1915.

Free Speech for Radicals. By Theodore Schroeder, Cos Cob, Conn.

INSTITUTIONS OF LEARNING.

California: University of California, Register, 1914–15. *Connecticut:* Trinity College, Cat. 1915–16. Wesleyan University, Cat. 1915–16; Bull. 9, 4, D. '16. *Iowa:* Coe College, Courier, xvi, 5. Parsons College, Bull. xv, 4, D. '15; 5, Jan. '16. *Maine:* Bates College, Cat. 1915–16. *Massachusetts:* Harvard University, Cat. 1915–16. Massachusetts Institute of Technology, Cat. 1915. Smith College, Cat. 1915–16. *Nebraska:* Bellevue College, Bull. xiv, 4. University of Nebraska, College of Agriculture, Bull. No. 32 and No. 33; Extension Bulletin No. 34; Agricultural Experiment Station, Bull. No. 154 and No. 155. *New Hampshire:* Dartmouth College, Cat. 1915–16. *New York:* Alfred College, Cat. 1915–16. Vassar College, Annual Cat. 1915–16. *Pennsylvania:* Bryn Mawr College, Calendar, viii, Pt. 4, N. '15. *Rhode Island:* Brown University, Cat. 1915–16.

HOSPITAL REPORTS.

Annual Report of the Battle Creek Sanitarium, 1914.

Seventeenth Annual Report of the Free Hospital for Poor Consumptives and White Haven Sanatorium Association, March 1, 1914, to February 28, 1915.

Thirty-third Annual Report of the Corporation of the Hospital Cottages for Children, Baldwinville, Mass., 1915.

REPRINTS.

Acknowledgment is made of the receipt of reprints upon topics of medicine other than medical sociology from Drs. William Seaman Bainbridge, New York (3); H. O. Marcy, Boston; L. Harrison Mettler, Chicago; M. A. Mortensen, Battle Creek, Mich.; and from Raymond H. Drake, H. C. Hamilton, Walter E. King, Carey Pratt McCord, L. W. Rowe, Detroit.

MEMBERSHIP IN THE
American Academy of Medicine

I.—FELLOWS. "*The Fellows shall be liberally educated physicians, as interpreted by the rules formulated by the Council and adopted by the Academy.*" At its organization and for a number of years thereafter the Academy required the possession of an *academic* degree in addition to the "M.D.," because it was the only tangible standard available. With the adoption of satisfactory medical practice acts and the consequent keying up of the better schools of medicine, this is no longer required. Any physician deemed by the Council as having shown himself an educated physician is eligible. Admission is secured thru application upon the recommendation of a Fellow and the approval of Council. The initiation fee is Five dollars, the annual dues are Three dollars. Blank applications furnisht on request.

II.—ASSOCIATE MEMBERS. "*Associate members shall be elected from among those working along sociologic, educational or other scientific lines closely related to the work of the Academy, and who have made notable contributions in their respectiv lines.*" Election is on proposal of two fellows. There are no financial obligations connected with Associate membership. Associate membership affords the opportunity to secure the cooperation of expert laymen in the deliberations of the Academy. Fellows are urged to send for blank proposals and secure additions to this class of members.

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